Instructions for the System Installation Procedure of the Neptun III IBM-Laptop Models X31, T40, and T40p

(die deutsche Version dieses Dokumentes ist zu finden auf `http://www.neptun.ethz.ch/docs`)

Contents:

➔ please note: by "ETH" is always meant ETH Zurich

1 Your laptop and your responsibility

You have bought a new laptop via the Neptun project. It is your laptop now, which means that maintenance, i.e. keeping it up to the latest security standards, and data care is in your responsibility. This document provides basic help. However, you can obtain support if you feel uncertain; more help is given in the next section.

2 More help

Detailed help is available on the Web at `http://www.neptun.ethz.ch/services/support/` where you also find the list of the responsible helpdesks. The helpdesks are responsible for ETH-students only. ETH-members are asked to refer to their departmental support group.

2.1 Remarks for ETH members:

➔ All Neptun owners will be informed about updates for their Neptun laptop via the Message Tree of the ETH Informatikdienste. If you want to change your subscription, you can do this at `https://n.ethz.ch/cgi-bin/MessageTree/main.cgi`.

➔ If you have forgotten your n.ethz-password, contact the hotline at 01 632 7777 or hotline@student.ethz.ch. See `http://n.ethz.ch/hotline_start.html` for opening hours and web based help.

3 Default installation procedure

The default installation divides the hard disk into two Windows partitions (English XP Professional system, data) and four Linux partitions (multilingual Debian system (root), data, hibernation, swap).

During the default installation, you can set the date/ time and the keyboard layout. You can also change the size of the partitions, but we recommend leaving the presented setup.

The default installation will erase all data (if any) on your hard disk, incl. the preloaded Windows system by IBM!

1. Connect your laptop to the power supply.

2. Connect your laptop to the Internet via the Ethernet interface if you like to have your clock set by a network time server. Otherwise, you can install your laptop without any network connection.

3. Start your laptop by pressing the on/off-button.

4. Press `F12` to show the boot menu.

5. Insert the Neptun 3-Install-DVD.

6. Choose the `CD-ROM drive` from the boot menu and press `ENTER`.

7. The boot process takes about 2 minutes and takes you to the welcome screen.

8. Read the welcome screen and press `OK`.

9. Set keyboard, date/time (when setting manually, move the underline cursor from field to field with the right/left arrow keys, set with up/down arrow keys), and the operating systems to install. The corresponding points in the list are marked with `done` in the main menu screen.

    ➔ Avoid entering the `step by step installation` point here, because you cannot come straight back to the Main Menu, but have to exit the installer, switch off the laptop and start at point 3 again.

10. Choose the fourth item in the list, `Fully Automated Installation`. Up to this point, no data has been written on your hard disk.

11. Answer the question `Start fully automated installation?` with `Yes` (use the cursor keys to change the choice from `No` to `Yes`).

12. Press ENTER to accept the new partition table, if asked.

13. The installation runs automatically to the end. This takes about 30-45 minutes.

14. After the installation, select `Reboot the laptop`. Eject the DVD by pushing the button on the DVD-drive.

15. Let Windows do the disk check and reboot. Click through the Windows XP setup.

    ➔ The serial number of Windows XP is printed on the Microsoft sticker at the back of your laptop.

    ➔ Don't interrupt the Windows configuration, even if the network setup takes several minutes, it only seems to be stuck (when not connected to the network).

16. Take your time and browse the ReadMe-File when logged in. Create a `restricted user account`.

    ➔ If you are not an ETH member, you will also see a black DOS-window and a Norton AntiVirus installation dialog. Do not touch the black window, and click through the Norton AntiVirus installer.

17. Restart the computer and choose Debian/GNU Linux from the list of installed operating systems, do **not** choose the recovery mode Debian/GNU Linux.

18. Follow the onscreen instructions.

19. Your laptop is now ready to use in the ETH environment with Linux and Windows. People outside the ETH Zurich may need to adapt the network settings to their network provider.

4 After the installation

➔ Remember to backup your personal data frequently. Keeping data and system files on separate partitions facilitates system reinstallations.

➔ After switching on your laptop, you can choose the system to boot from the list. If you don't choose anything Windows will start up by default.

5 Shut down of the IBM T40p ➔ please read!

Follow the instructions below to shut down your T40p completely:

1. Shut down the Linux-system.

2. Now you can still see two lights on at the right bottom of the laptop screen (the battery symbol and the one left of it). This indicates that the T40p is not completely shut down yet and therefore still consumes power.

3. For a complete shutdown, press the on/ off-button (for about 10 seconds) until the symbol left of the battery symbol turns off.

6 No modem connection under Linux

Currently there are no modem drivers available for Linux and these IBM models. Therefore you cannot connect via the internal modem under Linux.

7 Network connections and security configuration remarks

7.1 Firewall

During the installation of Windows XP, a firewall is activated to protect your laptop from undesired outside access by hackers and viruses. Per default, the firewall is completely closed from the outside, but open for outgoing connections. This setup is working in most cases, but stops local file sharing networks in Windows, or more precisely, automatic name resolution. Keeping in mind that holes in the firewall make your system more vulnerable to attacks you can configure your firewall at menu `Start -> Control Panel -> Network Connections -> Local Area Connection -> Advanced Flag -> Settings.`

7.2 For ETH Zurich -Members

7.2.1 Network configurations
Three network setups for the Ethernet interface (DHCP), Wireless LAN and VPN at ETH are installed per default. Note that you need your n.ethz-username and password to logon which is sent to you at the beginning of your employment/ enrolment at ETH.

7.2.2 VPN-Connections (Virtual Private Network) into the ETH-Network
Remark: VPN creates a secure tunnel to the ETH network through the Internet. All data transmitted is encrypted. VPN connections to the ETH are recommended, and even required if you use wireless connections.

7.2.2.1 Linux
For connections over Ethernet cable: Open a shell and type as root (without quotes) `vpnclient connect ethz`. You will be prompted for n.ethz username and password. To terminate the connection, press `<ctrl>-c` or alternatively type `vpnclient disconnect`.

For connections over wireless LAN: Open a shell and type (as any user) `vpn up`. To terminate the connection type `vpn down`.

7.2.2.2 Windows
Use `Start -> Programs -> ETHZ -> VPN Client -> VPN Dialer` or double-click the open lock symbol in your taskbar. The settings are preconfigured, just click the `connect` button (when you are online) to establish the secure tunnel to the ETH network. You will be prompted for your n.ethz-username and password. When the connection is established you can see a shut lock in your taskbar.

To disconnect the VPN connection, right-click this lock and select `disconnect`.

8 Updating your systems and software

8.1 Systems

8.1.1 Linux
Updating the system is simple, but not automated. Open a shell window and login as root (if you are logged in as `plain` user, you can become root by typing `su` in the shell and enter the root password). Then type `apt-get update` and thereafter `apt-get upgrade`.

8.1.2 Windows
Windows is configured to automatically check for system updates when connected to the network and notify you before starting any installation. You can check the settings in menu `Start -> Control Panel -> System -> Automatic Updates`.

8.2 Software Packages (only for members of the ETH Zurich)
➔ Members of the ETH Zurich can access updated software packages at `https://www.neptunupdate.ethz.ch`. Your nethz-username and password is required.

➔ All Neptun III laptop - owners will be informed about updates for their Neptun laptop via the Message Tree of the Informatikdienste ETH Zurich. Your address has been subscribed automatically. If you want to change your subscription you can do this at `https://n.ethz.ch/cgi-bin/MessageTree/main.cgi`.

9 Reinstalling one system only

Reinstalling one system only, e.g. if one operation system has become corrupt:

1. Start your laptop.
2. Press `F12` to enter the boot menu.
3. Insert the Neptun-3-DVD.
4. Choose `CD-ROM drive` to boot from.
5. In the main menu choose Step-by-Step-Installation and press `ENTER`.
6. Choose your keyboard.
7. Enter the menu `Disk Partitioning`, choose `OK` and press `ENTER`.
8. Now you can choose which operating system you want to reinstall. Choose the corresponding line and `ENTER`. Continue:

9.1 Linux

Do only reinstall the system partition, not the HOME partition of Linux; otherwise you will lose all your personal data on this partition.

Reinstalling the system will delete all former user accounts. If you only restored the root partition and thereafter recreated all user accounts in the same order as you originally created them, your data will be as it was before the reinstallation.

1. Install the Debian Linux Root partition, and the GRUB Boot loader. The hibernation partition doesn't need to be reinstalled; it serves the system as data suspension space for the sleep mode.

    ➔ Do not overwrite the HOME partition where your data is located, otherwise you will lose it.

2. After the installation, choose `Back to Main Menu` and there `Exit Installer`.
3. When you are on the screen `neptun3 login:` press `ctrl-alt-delete` to reboot and eject the DVD by pressing the button on the DVD-drive.
4. Thereafter, choose `Debian/GNU Linux` from the list of installed system and press `ENTER-Taste`.
5. Linux boots and enters the configuration procedure as described in the `Default Installation` section.

➔ Remark for advanced Linux users: Before reinstalling your system, you can try to fix the existing Linux system by booting into the single user mode. Do so by switching on your laptop and choosing `Debian/GNU Linux recovery` from the system selection screen.

9.2 Windows

You will lose all data on the C: drive incl. all former user accounts. So, unless you have used the data partition, your personal data will be lost as soon as you reinstall the Windows system partition

1. After reinstalling the system partition, accept `Execute Command (Enlarge File system to Size of Partition)` when prompted.

2. Choose `Back to the Main Menu` and there `Exit Installer`.

3. When you are on the screen `neptun3 login:` press `ctrl-alt-delete` to reboot and eject the DVD by pressing the button on the DVD-drive.

4. Thereafter Windows boots and enters the configuration procedure as described in the `Default Installation` section.